

Notice of Allowability

Application No.

09/987,722

Examiner

Perez M. Angelica

Applicant(s)

BROTHERS ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed on 01/05/2006.
2. ☒ The allowed claim(s) is/are 1-13, 15-30, 32-50 and 52-56.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. The following is an examiner's statement of reasons for allowance:

Regarding claims 1 and 22, the prior art of record teaches of a method for wireless communication, comprising the steps of: determining sectors of a cell; where the determined sectors are 120 degree sectors; for a first user comprising: determining a first downlink transmission beam and a second downlink transmission beam in the sectors based on a received user-derived signal, the first downlink transmission beam being substantially uncorrelated with the second downlink transmission beam, the first downlink transmission beam being associated with a portion within a first sector of the spatial domain, the second downlink transmission beam being associated with a portion within a second sector of the plurality of sectors; diversity encoding a first signal in the first sector to produce a first diversity-encoded signal; diversity encoding a second signal in the second sector to produce a second diversity-encoded signal; sending the first diversity-encoded signal over the first downlink transmission beam; and sending the second diversity-encoded signal over the second downlink transmission beam.

Regarding claim 36, the prior art of record teaches of an apparatus, comprising: a searcher configured to identify a received user-derived signal within the cell having plural sectors; a beam controller coupled to the a first transmit beam switch coupled to the beam controller; a second transmit beam switch coupled to the beam controller; a diversity coder coupled to the first transmit beam switch and the second transmit beam switch, the diversity coder configured to send a first diversity encoded signal to the first transmit beam switch based on the user-derived signal, the first downlink transmission

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beam being substantially uncorrelated with the second downlink transmission beam, the first downlink transmission beam being associated with a portion within a first sector, the second downlink transmission beam being associated with a portion within a second sector; diversity encoding a first signal to produce a first diversity-encoded signal; diversity encoding a second signal to produce a second diversity-encoded signal (column 3, lines 18-19; where the signals were encoded according to the different "power coefficient indicators"); sending the first diversity-encoded signal over the first downlink transmission beam; and sending the second diversity-encoded signal over the second downlink transmission beam.

However, the prior art of record does not teach alone or in combination where the first downlink transmission beam is associated with a first uplink multipath from a plurality of uplink multipaths associated with the first user. the second downlink transmission beam is associated with a second uplink multipath from the plurality of uplink multipaths, the first uplink multipath and the second uplink multipath being no less optimal than the remaining uplink multipaths from the plurality of uplink multipaths.

2. Claims 1-13, 15-30, 32-50 and 52-56 are dependent upon claims 1, 22 and 36; therefore, the examiner gives the same reasons for allowance as set forth above.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 571-272-7885. The examiner can normally be reached on 7:00 a.m. - 3:30 p.m., Monday – Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only. For more information about the pair system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

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Angelica Perez
(Examiner)

EDAN ORGAD
PATENT EXAMINER/TELECOMM.

h.o. 3/20/07
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